



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,309	05/30/2001	Hiroyuki Yamada	MAT-8140US	1614

7590 12/19/2002

RATNER AND PRESTIA
Suite 301
One Westlakes, Berwyn
P.O. Box 980
Valley Forge, PA 19482-0980

EXAMINER

EASTHOM, KARL D

ART UNIT	PAPER NUMBER
----------	--------------

2832

DATE MAILED: 12/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/871,309

Applicant(s)
Yamada et al.

Examiner
Karl Easthom

Art Unit
2832



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 15, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-5, 9 and 11-16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The new limitations lack written description. There is no description for electrodes disposed ...along said length, where the width is shorter than a length of a substrate. The electrodes 11, 12 at Fig. 1 appear disposed along the width - the shorter of the sides.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

4. Claims 1-2, 4-7, 9-11, and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Edwards, Jr. et al. The claimed invention is disclosed at Fig. 1 or Fig. 2 of Edwards with S-shape section 24 having side sections at the ends, and electrodes 22. In Edwards, the whole substrate surface is printed, then etched, before applying the electrodes, thus leaving the width of the resistor under and along the edges of the electrodes. In Fig. 2 the resistor sections 50,52 are

connected under the terminal part 46 and are deemed one resistor since they are connected as one, according to the method of manufacture having 60 covering the whole surface - see Fig. 5 and the discussion thereof. The prior art at Fig. 1 is deemed to have been made in the same manner, or the disclosure contemplates such a method. In claims 2-3, that width of the side section is at least twice as wide as the electrode 42 since it cannot be etched away with the terminal over it. In claim 11, the width of a small section of 24 in Edwards is taken as the distance along the long edge, where applicant appears to claim this distance as a "longitudinal width", so that the S-shape is in the middle having several turns, and the side sections have only $\frac{1}{2}$ turn, so that the "width" is less. In claims 15-16, Edwards shows only a single S in the middle, which is highlighted in the reference, where the side sections are the other portions, and do not have a complete S, as seen.

5. Claims 1-2, 4, 6-7, 9-11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Mizukoshi et al. Mizukoshi et al. discloses the invention at Figs. 1 and 4 with the S-shape having side sections at the ends, and electrodes 3, 4. In Mizukoshi the width is greater at the ends as seen. The side sections of the resistor are seen under electrodes 3,4 -see the section surrounding holes 103 at Fig. 4.

6. Claims 1-2, 6-7, 11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Collins. Collins discloses the invention at 1A and Fig. 3 with the S-shape resistor R having side sections at the ends. The side sections are where 11 and 12 point at Fig. 1A - under the electrodes OG in Fig. 3. In claims 2, 4 and 11, the width of a small section of R is taken as the distance along the long edge, where applicant appears to claim this distance as a "longitudinal

width", so that the S-shape is in the middle having several turns, and the side sections have only $\frac{1}{2}$ turn, so that the "width" is less.

7. Claims 1-6, and 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Kambara et al. Kambara discloses the claimed invention at Figs. 3-4. The side sections are the part of the resistor under the electrodes 3,"3" and 4" 4". In claims 8 and 12, each section is contemplated to be trimmed (see cut 8a"" - meeting claim 12), and in these claims the side sections are considered to continue from the electrode to the trimmed portions.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3, 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizukoshi et al. in view of Collins. Mizukoshi discloses the claimed invention except for a trimming groove in the rectangular or side sections. Solow discloses a groove 40 in the side sections to adjust the resistance, and it would have been obvious to place a groove in the thickest section as shown in order to render a trim that slowly alters the resistance as it is made. As to forming a second groove, it would have been obvious where one groove did not obtain the desired result where a higher resistance is required.

10. Applicant's arguments filed 4/30/02 have been fully considered but they are moot or not persuasive. Applicant argues that the pair of electrodes extending to opposite edges is not

disclosed or suggested. First, as noted, there is no disclosure for such an element, since Fig. 1 shows electrodes 12 not extending to any opposite edges. Alternatively, it is disclosed as noted above.

11. Applicant's arguments filed 10/15/02 have been fully considered but they are not persuasive. Applicant argues that the side section of Edwards are not disclosed as along a substantial portion of the length of the electrodes along the width of the substrate. This is not correct because the whole side section is the same shape as the terminal 42 since it was put on before the terminal and before the etching to create the resistor 50, 52. In Mizukosi, the side portions are as described above. As to Collins, the argument is not understood since the side sections where 11, and 12 point at Fig. 1A are under the electrodes OG in Fig. 3. The rejections using Solow as a primary reference are removed as cumulative.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl Easthom whose telephone number is (703)308-3306. The examiner can normally be reached on M-Th. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad, can be reached on (703)308-7619. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7722. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


KARL D. EASTHOM
PRIMARY EXAMINER